

CLAIMS:

1. A belt for use in carrying one or more waist-mounted respiratory protection components, the belt comprising:
 - a main belt portion having a back section, a left side section, a left connective section between the back section and the left side section, a right side section and a right connective section between the back section and the right side section wherein the back section is the widest section of the main belt portion,
wherein the main belt portion has a generally conical shape to be secured around a user's pelvic girdle to align a respiratory protection component thereon over the lumbar region of the user's spine to distribute a weight of the respiratory component around a pelvis of the user;
 - a mounting clip attached to the main belt portion for mounting the respiratory component to the main belt portion; and
 - a belt buckle portion having a right piece connected to the right side section of the main belt portion and a left piece connected to the left side section of the main belt portion.
2. The belt of claim 1 wherein the mounting clip is releasably attached to the main belt portion.
3. The belt of claim 2 wherein the back section of the main belt portion includes a plurality of slots therein for use in mounting the respiratory component thereon.
4. The belt of claim 3 wherein the mounting clip is woven through at least one of the slots.
5. The belt of claim 1 wherein the left and right side and connective sections are symmetrically shaped relative to the back section, and further wherein each side section has a generally horizontal forward segment and a downwardly angled rearward segment.

6. The belt of claim 1 wherein each connective section of the main belt portion defines a plurality of downwardly and outwardly radiating hinges thereon to facilitate bending in use.
7. The belt of claim 1 wherein the main belt portion has an upper peripheral edge and a lower peripheral edge, and wherein along at least a flared portion of the main belt portion, the lower edge extends outwardly, relative to a user, beyond the upper edge.
8. The belt of claim 7 wherein the flared portion extends along the entire main belt portion.
9. The belt of claim 7 wherein the flared portion includes the right and left side sections.
10. The belt of claim 1 wherein the main belt portion is formed at least partially from a generally rigid material, relative to the right and left pieces of the belt buckle portion.
11. The belt of claim 1 wherein the main belt portion is formed from an ethyl vinyl acetate (EVA) co-polymer.
12. The belt of claim 1 wherein the main belt portion has an outer layer and an inner layer, the outer layer providing rigidity and the inner layer providing a cushioning layer.
13. The belt of claim 12 wherein the inner layer is formed from an ethyl vinyl acetate (EVA) co-polymer with a polyolefin elastomer having a density of about 70 g/m to about 75 g/m.
14. The belt of claim 12 wherein the outer layer is formed from an ethyl vinyl acetate (EVA) co-polymer with a polyolefin elastomer having a density of about 125 g/m.

15. The belt of claim 1 wherein the main belt portion is formed from materials that is readily decontaminatable.
16. The belt of claim 1 wherein the back section of the main belt portion is reinforced.
17. The belt of claim 1 wherein the main belt portion has an inner face and an outer face, and wherein the inner face on the back section has at least one generally vertically disposed air flow channel therein.
18. The belt of claim 1 wherein the main belt portion has an inner face and an outer face, and wherein an inner face of each of the connective sections has a plurality of generally vertically disposed channels therein.
19. The belt of claim 1, and further comprising:
one or more connector elements on the main belt portion for use in mounting
additional supportive or respiratory components thereto.
20. The belt of claim 1 wherein at least one of the right and left pieces of the belt buckle portion is adjustable in length.
21. The belt of claim 1 wherein free ends of the right and left pieces of the belt buckle portion are selectively connected together by a releasable buckle.
22. The belt of claim 1 wherein the belt buckle portion is formed from a coated polyester.
23. The belt of claim 22 wherein the polyester is coated with a polyurethane.
24. The belt of claim 23 wherein the polyester is coated with a PVC.

25. The belt of claim 1 wherein the belt buckle portion is releasably connected to the main belt portion.

26. A belt for use in carrying one or more waist-mounted respiratory protection components, the belt comprising:

a main belt portion having a back section, a left side section, a left connective section between the back section and the left side section, a right side section and a right connective section between the back section and the right side section wherein the back section is the widest section of the main belt portion,

wherein the main belt portion is shaped to be secured around a user's pelvic girdle and to distribute a weight of the respiratory component around a pelvis of the user, and further wherein the shape of the main belt portion promotes a sacral angle of the user's pelvis and spine of about 30 degrees;

a mounting clip attached to the main belt portion for mounting the respiratory component to the main belt portion; and

a belt buckle portion having a right piece connected to the right side section of the main belt portion and a left piece connected to the left side section of the main belt portion.

27. The belt of claim 26 wherein the mounting clip is releasably attached to the main belt portion.

28. The belt of claim 27 wherein the back section of the main belt portion includes a plurality of slots therein for use in mounting the respiratory component thereon.

29. The belt of claim 28 wherein the mounting clip is woven through at least one of the slots.

30. The belt of claim 26 wherein the left and right side and connective sections are symmetrically shaped relative to the back section, and further wherein each side section has a generally horizontal forward segment and a downwardly angled rearward segment.

31. The belt of claim 26 wherein each connective section of the main belt portion defines a plurality of downwardly and outwardly radiating hinges thereon to facilitate bending in use.

32. The belt of claim 26 wherein the main belt portion has an upper peripheral edge and a lower peripheral edge, and wherein along at least a flared portion of the main belt portion, the lower edge extends outwardly, relative to a user, beyond the upper edge.

33. The belt of claim 32 wherein the main belt portion has a generally conical shape.

34. The belt of claim 32 wherein the flared portion extends along the entire main belt portion.

35. The belt of claim 32 wherein the flared portion includes the right and left side sections.

36. The belt of claim 26 wherein the main belt portion is formed at least partially from a generally rigid material, relative to the right and left pieces of the belt buckle portion.

37. The belt of claim 26 wherein the main belt portion is formed from an ethyl vinyl acetate (EVA) co-polymer.

38. The belt of claim 26 wherein the main belt portion has an outer layer and an inner layer, the outer layer providing rigidity and the inner layer providing a cushioning layer.

39. The belt of claim 38 wherein the inner layer is formed from an ethyl vinyl acetate (EVA) co-polymer with a polyolefin elastomer having a density of about 70 g/m to about 75 g/m.

40. The belt of claim 38 wherein the outer layer is formed from an ethyl vinyl acetate (EVA) co-polymer with a polyolefin elastomer having a density of about 125 g/m.

41. The belt of claim 26 wherein the main belt portion is formed from materials that is readily decontaminatable.

42. The belt of claim 26 wherein the back section of the main belt portion is reinforced.

43. The belt of claim 26 wherein the main belt portion has an inner face and an outer face, and wherein the inner face on the back section has at least one generally vertically disposed air flow channel therein.

44. The belt of claim 26 wherein the main belt portion has an inner face and an outer face, and wherein an inner face of each of the connective sections has a plurality of generally vertically disposed channels therein.

45. The belt of claim 26, and further comprising:
one or more connector elements on the main belt portion for use in mounting
additional supportive or respiratory components thereto.

46. The belt of claim 26 wherein at least one of the right and left pieces of the belt buckle portion is adjustable in length.

47. The belt of claim 26 wherein free ends of the right and left pieces of the belt buckle portion are selectively connected together by a releasable buckle.

48. The belt of claim 26 wherein the belt buckle portion is formed from a coated polyester.

49. The belt of claim 48 wherein the polyester is coated with a polyurethane.

50. The belt of claim 48 wherein the polyester is coated with a PVC.

51. The belt of claim 26 wherein the belt buckle portion is releasably connected to the main belt portion.

52. A belt for use in carrying one or more waist-mounted respiratory protection components, the belt comprising:

- a main belt portion, the main belt portion having a back section, a left side section, a right side section, a left connective section between the back section and the left side section, and a right connective section between the back section and the right side section,
 - the back section being wider than the other sections of the main belt portion and having a plurality of slots therein for use in mounting a respiratory protection component thereon,
 - the left and right side and connective sections being symmetrically shaped relative to the back section,
 - each side section having a generally horizontal forward segment and a downwardly angled rearward segment; and
- a belt buckle portion having a right piece connected to the right side section of the main belt portion and a left piece connected to the left side section of the main belt portion,

wherein the main belt portion is shaped to be secured around a user's pelvic girdle and to align the respiratory component thereon over the lumbar region of the user's spine at an ideal angle of inclination of approximately 15 degrees, to distribute a weight of the respiratory component around a pelvis of the user, allow free leg movement,

minimize pinching adjacent a user's iliac crests during such movement, and shift the rotational momentum of the weight of the respiratory component toward the user, thus further enhancing user comfort.

53. The belt of claim 52 wherein each connective section of the main belt portion defines a plurality of downwardly and outwardly radiating hinges thereon to facilitate bending in use.

54. The belt of claim 52 wherein the main belt portion has an upper peripheral edge and a lower peripheral edge, and wherein along at least a flared portion of the main belt portion, the lower edge extends outwardly, relative to a user, beyond the upper edge.

55. The belt of claim 54 wherein the main belt portion has a generally conical shape.

56. The belt of claim 52 wherein the main belt portion is formed at least partially from a generally rigid material, relative to the right and left pieces of the belt buckle portion.

57. The belt of claim 52 wherein the main belt portion has an outer layer and an inner layer, the outer layer providing rigidity and the inner layer providing a cushioning layer.

58. The belt of claim 52 wherein the main belt portion is formed from materials which are readily decontaminatable.

59. The belt of claim 52 wherein the back section of the main belt portion is reinforced.

60. The belt of claim 52 wherein the main belt portion has an inner face and an outer face, and wherein the inner face on the back section has at least one generally vertically disposed air flow channel therein.

61. The belt of claim 52 wherein the main belt portion has an inner face and an outer face, and wherein an inner face of each of the connective sections has a plurality of generally vertically disposed channels therein.

62. The belt of claim 52, and further comprising:
one or more connector elements on the main belt portion for use in mounting
additional supportive or respiratory components thereto.

63. The belt of claim 52 wherein at least one of the right and left pieces of the belt buckle portion are adjustable in length.

64. The belt of claim 52 wherein free ends of the right and left pieces of the belt buckle portion are selectively connected together by a releasable buckle.

65. The belt of claim 52 wherein the belt buckle portion is releasably connected to the main belt portion.